

REMARKS

This is a full and timely response to the Decision on Appeal mailed May 15, 2008. Pursuant to 37 C.F.R. §41.50, Applicant respectfully submits the foregoing amendment and following remarks for consideration by the Examiner.

Claims 1-8, 11-20, and 26-29 are pending in this application, with claims 1, 11, 16, and 26 being the independent claims. Claims 1, 2, 3, 6, 7, 8, 11, 15, and 19 have been amended. Claims 9, 10, and 21-25 have been canceled, and claims 26-29 have been added. No new matter has been added.

Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 6, 8-15, 19, and 21-25 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Particularly, the Board noted that claims 6, 15, and 19 recite the term “significant,” and argued that the Specification fails to provide a measure for determining the scope of the term. In response, Applicants have replaced the unit “dB per decade for at least one decade after a significant resonance” with the unit “dB/decade,” which is used throughout the specification and well known in the art.

Claims 8-15 and 21-25 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Particularly, the Board noted that claims 8 and 21 recite the “mechanical equivalent of the isolator comprising four tunable parameters” and argued that the metes and bounds of the “mechanical equivalent” cannot reasonably be determined by reading the claims in light of the Applicants’ Specification. Claims 21-25 have been cancelled, and claim 8 has been amended to remove this language.

Rejections Under 35 U.S.C. § 102

Claims 1-25 are rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,332,070 to Davis et al. (“Davis”). Claims 9, 10, and 21-25 have been cancelled. The rejection of the remaining claims is respectfully traversed.

Claims 1-7

Claim 1, recites, in part, “wherein the ratio of the cross sectional area of the first fluid containment chamber and the second fluid containment chamber to the cross sectional area of the annular damping path is chosen to produce an effective mass of the

fluid to enhance vibration damping and isolation, the effective mass of the fluid greater than the true fluid mass.”

The Examiner has acknowledged that this limitation is not found in Davis. The Board incorrectly argues that Davis discloses this limitation. The Board states:

Davis discloses that ‘in the preferred embodiment the cross sectional area of the plurality of secondary fluid paths of one of the extensions 22, 24 is approximately 32 times as large as the cross sectional area of the damping annulus 32’ (col. 7, ll. 5-9). That is done so ‘[t]he resistance to flow through the secondary fluid paths 26, 28...is made small as compared to the primary damping annulus 32 to minimize damping by such secondary fluid paths 26, 28’ (col. 7, ll. 1-5). Because Davis’s first (46) and second (48) primary fluid chamber cross-sectional areas are greater than the cross-sectional area of the annular damping annulus 32, the effective fluid mass is greater than the true fluid mass.

Even if Davis discloses that the effective fluid mass is greater than the true fluid mass, Davis does not disclose that the cross sectional ratio can be chosen such that the effective fluid mass enhances vibration damping and isolation. Merely having an effective fluid mass greater than the true fluid mass is not enough to anticipate the claim. To anticipate, Davis must show all claim limitations, including a showing of the adjustment of the recited ratios. As noted in MPEP §2121, anticipation requires “[t]he identical invention must be shown in as complete detail as is contained in the...claim.” Similarly, as stated by the Federal Circuit, “[f]or a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art.” *Motorola, Inc. v. Interdigital Technology Corp.*, 121 F.3d 1461 (Fed. Cir. 1997).

Even though the Board makes an anticipation rejection, the portion of Davis cited by the Board would actually teach away from modifying the cross sectional areas as recited by the claim. Davis merely states that the resistance to flow through secondary fluid paths is small relative to the primary damping annulus “to minimize damping by such secondary fluid path,” not to increase the effective fluid mass.

Claim 1 additionally recites “wherein at least one of the cross sectional area of the

damping path, the cross sectional area of the first fluid containment chamber, and the cross sectional area of the second fluid containment chamber is selected to provide active tuning of the effective mass of the fluid.” Davis clearly does not disclose this feature. In the rejections of claims 2 and 3, the Board states that Davis’s apparatus “is capable of permitting active tuning of the effective mass of the fluid.” It is respectfully submitted that merely being “capable” is not the standard for anticipation, and would not even satisfy an obviousness standard. As noted above, anticipation requires “[t]he identical invention must be shown in as complete detail as is contained in the...claim.” Similarly, “[f]or a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art.” *Motorola, Inc. v. Interdigital Technology Corp.*, 121 F.3d 1461 (Fed. Cir. 1997).

For at least these reasons, claim 1 distinguishes over Davis. Claims 2-7 recite additional features that distinguish over Davis.

Claim 5 further defines claim 1 by reciting “wherein the true mass of the fluid is less than the mass of the payload and the effective mass of the fluid is greater than or equal to the mass of the payload”. Although the Board states that Davis’s apparatus “is capable” of supporting a payload having a mass between the fluid’s true mass and effective mass, merely being “capable” of having a limitation is insufficient for an anticipation rejection.

Claim 5 further defines claim 1 by reciting “wherein the effective fluid mass of the fluid is chosen to give the apparatus a roll-off of -60dB per decade for at least one decade after a significant resonance.” Contrary to the argument of the Board, Davis, in Fig. 1C, discloses, at 10 Hz, the transmissibility is a little more than about -30 dB and, at 100 Hz, the transmissibility is about -70 dB. Thus, for one decade (10^1 to 10^2 Hz), the change in the transmissibility, or roll-off, is -40 dB, not the -68 dB cited by the Board.

Claims 8 and 10-15

Claim 8 recites “isolator comprising four tunable parameters.” Davis merely discloses three tunable parameters and fails to disclose a fourth tunable parameter, as discussed above with reference to claim 1.

Claim 8 also recites “wherein the true fluid mass is less than a mass of a payload coupled to the isolator and the effective mass is equal to or greater than the mass of the

payload.” As noted above, the fact that Davis “is capable” of supporting a payload with a mass less than or equal to the effective mass is insufficient to support an anticipation rejection, or even an obviousness rejection. As noted in MPEP §2121, anticipation requires “[t]he identical invention must be shown in as complete detail as is contained in the...claim.”

For at least these reasons, claim 8 distinguishes over Davis. Claims 11-15 recite additional features that distinguish over Davis.

For example, claim 15 recites “wherein the effective fluid mass of the fluid is chosen to provide a roll-off of –60dB per decade for at least one decade after a significant resonance.” As discussed above in reference to claim 6, in Davis, the roll off for a three parameter system is about -40 dB per decade.

Claims 16-20

Independent claim 16 recites, in part, “a fourth parameter comprising the ratio of a cross sectional area of the primary–isolation means to a cross sectional area of the damping path, the ratio chosen to provide a fluid mass effect, the fluid mass effect determined by an effective mass of the fluid, the effective mass of the fluid greater than a true fluid mass.” This is similar to the limitation discussed previously in conjunction with claim 1 and claim 8. As noted above, *Davis* does not disclose a fourth parameter. In particular, no such ratio is **chosen** to provide a fluid mass effect.

For at least these reasons, claim 16 distinguishes over Davis. Claims 17-20 recite additional features that distinguish over Davis.

For example, claim 18 recites “wherein the cross sectional area of the damping path can be changed to permit active tuning of the fluid mass effect.” This limitation was discussed above.

Claim 19 recites “wherein the fluid mass effect is chosen to give the apparatus a roll-off of –60dB per decade for at least one decade after a significant resonance.” This limitation was discussed above.

New Claims

New claim 26 recites:

selecting a cross sectional area of the first fluid containment chamber;

selecting a cross sectional area of the second fluid containment chamber; and

selecting a cross sectional area of the annular damping path, wherein the cross sectional areas of the first fluid containment chamber, the second fluid containment chamber, and the annular damping path are selected such that the ratio of the cross sectional area of the first fluid containment chamber and the second fluid containment chamber to the cross sectional area of the damping path produce an effective mass of the fluid to enhance vibration damping and isolation, the effective mass of the fluid greater than the true fluid mass.

Davis clearly fails to disclose the method recited by claim 26. Particularly, Davis fails to disclose these selecting steps. Claims 27-29 recite method limitations that further distinguish over Davis.

Conclusion

Applicant submits that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

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If for some reason Applicant has not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

Dated: July 15, 2008

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